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Design and testing of the VSR blade tuner and actuators

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The VSR DEMO SRF 1.5 GHz cavities require a large tuning range of 1 MHz to allow for the desired operation, including a cavity parking mode. The tuning system composed of blade tuner, stepper motor, release mechanism, and pre-loaded piezos installed into frames features mostly components already validated and used for other applications. However, the operational demands for the VSR application require adaptation of some of the components and testing to assess performance during augmented operation. Here the results of all component tests, most performed at cryogenic temperature, are presented.

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Footnotes

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Yes

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